Tao Zhang

Tao Zhang
MS 6-2100
Advanced Light Source
Lawrence Berkeley National Laboratory
Berkeley, CA 94720-0001

Tel: (510) 207-6933 (cell)
(510) 666-8891 (home)
Fax: (510) 486-5311
Email: tzhang@lbl.gov
Web: http://leea.lbl.gov/~tao

Objective

An engineer position in semiconductor industry.

Education

1998-present **Ph.D.** University of California, Davis (Davis, CA)
Lawrence Berkeley National Laboratory (Berkeley, CA)

Major – Physical Chemistry (Laser Spectroscopy and Chemical Dynamics)

- Thesis Advisor: Prof. Cheuk Y. Ng
- GPA of 3.85 on a 4-point scale.
- Teaching Award

1996-1998 **M.S.** University of Science and Technology of China

Major – Physical Chemistry (Laser Spectroscopy)

- Research Mentor: Prof. Xingxiao Ma
- GPA of 3.80 on a 4-point scale.
- Di'Ao Fellowship

1991-1996 **B.S.** University of Science and Technology of China

Major – Chemistry

- Research Mentor: Prof. Xingxiao Ma
- GPA of 3.75 on a 4-point scale.

Research Experience

- High-repetition rate (3 kHz) Infrared (IR) Optical Parametric Oscillator (OPO) Laser technology
- Excimer Laser, Nd:YAG Laser and Dye Laser technology
- Ultra-high vacuum ($<10^{-9}$ torr) instrument technology
- Time-of-Flight (TOF) mass spectrometer and Quadrupole Mass Spectrometer (QMS) technology
- Extensive electronic devices handling and electronic signal analysis and manipulation
- Octople and Radio-Field (RF) technology
- Extensive experience with analytical technologies including HPLC, NMR, FT-IR.
- Mechanical design and development of novel modules (by AutoCAD)
- Multipurpose photoelectron photoion spectrometer design and modification
- Optical apparatus setup, alignment and analysis
- Data acquisitional design, implementation, modification and trouble shooting
- Automatic system control, modification and trouble shooting of scientific instruments
- Extensive data analysis skills, including interpretation of experimental data by simulation and theoretical computation, using numerical methods or ab initio quantum methods

Computer Experience

- Advanced LabVIEW programmer. 3 years experience in LabVIEW 6.1/6i/5.5, concentrating on:
  - VISA, GPIB, DataSocket, Serial, TCP/IP
  - Automated Control of various electronic/optoelectronic measurement devices
  - Data acquisition and data exporting/filing
- C/C++. 3 years experience, concentrating on:
  - Microsoft Visual C++ 6.0/5.0
  - National Instruments – NI-DAQ 6.6.0
- Visual Basic 6.0
- LabWindows/CVI (NI Measurement Studio 6.0)
- MatLab

Publication

Tao Zhang, Fei Qi, Liu S. Sheng, Cheuk Ng, "Photodissociation of Chloroiodomethane", (In preparation)

T. Zhang, X. Qian, X. Tang, C. Chang, C. Y. Ng, Y. Chiu, D. J. Levandier, J. S. Miller and R. A. Dressler, "A state-selected study of the H_2^+(X, v^+=0-17) + Ne proton transfer reaction using the pulsed field ionization-photoelectron-secondary ion coincidence scheme", *J. Chem. Phys.,* submitted.

X.-M. Qian, A. H. Kung, **Tao Zhang**, K. C. Lau, and C. Y. Ng, "Rovibrational-state selected photoionization of acetylene by the two-color IR + VUV scheme: observation of rotationally resolved Rydberg transitions", *Phys. Rev. Lett.*, submitted.

X.-M. Qian, **T. Zhang**, Y.-H. Chiu, D. J. Levandier, J. S. Miller, R. A. Dressler, and C. Y. Ng, "Rovibrational state-selected study of H_2^+ (X, v^+ = 0~17, N^+ = 1) + Ar using the pulsed field ionization-photoelectron-secondary ion coincidence scheme", *J. Chem. Phys.,* 118, 2455 (2003)

Ximei Qian, **Tao Zhang**, Cheuk. Y. Ng, Andy H. Kung, and Musa Ahmed, " Two-color photoionization spectroscopy using vacuum ultraviolet synchrotron radiation and infrared optical parametric oscillator laser", *Rev. Sci. Instrum.*, 74, 2784 (2003)

References

Available upon request.